



# UNITED STATES PATENT AND TRADEMARK OFFICE

ine

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/069,889	07/03/2002	Charles Neville Glew	P/70036-PCT	3875

7590 01/15/2004

Alan Israel  
Kirschstein Ottinger Israel & Schiffmiller  
489 Fifth Avenue  
New York, NY 10017-6105

EXAMINER

SCHEUERMANN, DAVID W

ART UNIT	PAPER NUMBER
----------	--------------

2834

DATE MAILED: 01/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/069,889

Applicant(s)

GLEW, CHARLES NEVILLE

Examiner

David W. Scheuermann

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 July 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 July 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the bulbous portion of the hull of a ship, propeller shaft extending outside thereof, and duct means arranged to supply exhaust coolant through the ship's hull must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 21-34, and 39 are rejected under 35 U.S.C. 102(b) as being anticipated by Willyoung, US 3348081. Willyoung shows an electrical machine, comprising:

- a) a stator (2);
- b) a rotor (4);
- c) a gap defined between the stator and the rotor (fig. 1);

Art Unit: 2834

d) coolant supply duct means (note the supply duct feeding the rotor fan);

e) coolant exhaust duct means ducts (leading to heat exchangers 9);

f) a plurality of substantially radially extending coolant passageways (5)

provided in a laminated core section of at least one of the stator and the rotor, the coolant passageways being defined between axially spaced stacks of laminations in the laminated core section, the coolant passageways being connected to the coolant supply duct means through the gap between the stator and the rotor; and

g) a matrix of coolant duct sections extending circumferentially and

axially of the laminated core section, a plurality of adjacent coolant duct sections being in fluid communication with each other in a direction transverse of a radial direction to transfer coolant in predetermined paths within the matrix, the matrix having first (the outside diameter of the core plates) and second ( surface 1) radially spaced apart faces, the first face being in fluid communication with the radially extending coolant passageways in the laminated core section, the second face being in fluid communication with the coolant exhaust duct means, (leading to heat exchangers 9) selected coolant duct sections (5b) communicating directly with the coolant exhaust duct means through the second face of the matrix.

Re claim 30-32, note the plenum chamber leading to fan 10 on the rotor.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2834

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 35-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Willyoung in view of Griffith et al., US 6583526. Willyoung discloses the invention of claim 34 substantially as claimed as set forth in the 102 rejection of claim 21 above. Willyoung does not expressly disclose cylindrical spacers to separate the laminations. Griffith et al. disclose cylindrical shaped posts across the entire stator lamination for the purpose of extending electric machine life as set forth in column 1, lines 43-45. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use the cylindrical shaped spacers of Griffith et al. to separate the laminations of Willyoung. One of ordinary skill in the art would have been motivated to do this to extend the life of the electric machine.

Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Willyoung in view of McCallister, US 1402875. Willyoung discloses the invention of claim 21 substantially as claimed as set forth in the 102 rejection above. Willyoung does not expressly disclose use of the electrical machine as a propulsion unit for a ship and located in a bulbous portion of the hull with coolant ducts to exhaust and supply coolant through the hull. McCallister discloses that the use of an electric machine within the bulbous hull of a ship for the purpose of driving a propeller shaft. It is inherent that the engine compartment within the ships hull of McCallister is vented as such ventilation is required per Coast Guard regulations for at least 5 minutes prior to the starting of the engine to ensure that any combustible gaseous mixtures, which tend to be heavier than

Art Unit: 2834

air, have been vented. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use electric machine of Willyoung to drive the ship of McCallister. One of ordinary skill in the art would have been motivated to do this to prevent loss of ship movement on long voyages due to overheating of the electric machine.

### ***Conclusion***

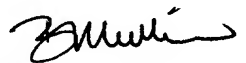
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Carrier, Kent, Vickers et al., MacDougal and Alger et al. all show stator cores with radial cooling gaps with cooling passageways around the periphery of the core. Kanzaki et al. show a matrix structure used to support a stator.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David W. Scheuermann whose telephone number is (703) 308-9637. The examiner can normally be reached on Monday through Friday from 8:00 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

dws  
January 12, 2004

  
BURTON S. MULLINS  
PRIMARY EXAMINER